Guangdong Technion
Israel Institute of Technology

GTIIT Front-End Developer Position - Home Assignment: University Grades Front-end Application

Overview: In this assignment, you will be building a front-end application that interacts with a back-end API to display student grades and enrollment information. The API provides 4 endpoints to retrieve data related to student enrollments, grades, exam notebook, and grade statistics for a particular course in a specific semester.

Please submit your solution by email, sharing the source code Zip file or repository URL.

The assignment has three sections:

1. UI Design planning: High-level UI design of the application using any tool of your choice such as Figma or Powerpoint. The UI should be intuitive, easy to use, and visually appealing. Consider including the following components:
- A dashboard page that displays an overview of the student's academic enrollments and performance.
- A grades component that shows the student's grades for all courses in a specific semester.
- An exam notebook component that allows the student to download their exam notebook for a specific exam.
- A course grade statistics component that displays the course statistics, such as pass rate, average grade, and student rank.
2. Front-End Development: Using any client-side technology you prefer, build the front-end application that interacts with the back-end API to retrieve and display student grades and enrollment information. You should implement the designed UI from section 1.
3. Short explanation and description: In this section, provide a brief explanation and description of the application you built, including any assumptions you made while building it and running instructions. You should also include a summary of the technologies you used and any best practices you followed, such as responsiveness, simplicity, etc.

Specific Requirements:

- The application should use the given API endpoints to retrieve and display student grades and information. You can use mock or in-code data or any other solution you like.
- The application should be responsive and work on multiple devices and screen sizes.
- The UI should be simple and intuitive to use.
- The code should be easy to understand.
- Any assumptions made while building the application should be clearly stated in the explanation and description section.
- The application should follow best practices for front-end development

API Specifications:

The back-end API provided for this assignment consists of four GET endpoints with the following URIs and response structures:

/enrollments: This endpoint retrieves the enrollments for a specific student in a given course and semester. The request can be made by providing the **studentId**, **courseCode**, and **semester** (of structure yyyy01/2/3) as query parameters. The response will include the **studentId**, **groupId**, **courseCode**, **semester**, and **type** of the enrollment.

Example request:
https://api.gtiit.edu.cn/enrollments?studentId=999000099&courseCode=016216&semester=201901

Example response:

{

"studentId": "999000099",

"groupId": "10",

"courseCode": "016216",

"semester": "201901",

"type": "Lecture"

}

/grade: This endpoint retrieves the grades for a specific student in a given course and semester. The request can be made by providing the **studentId**, **courseCode**, **semester**, and **take** (which can be **mid**, **1**, or **2**) as query parameters. The response will include the **studentId**, **courseCode**, **semester**, **take**, and **FinalGrade** for the given student.

Example request:
https://api.gtiit.edu.cn/grade?studentId=999000099&courseCode=016216&semester=201901&take=1

Example response:

{

"studentId": "999000099",

"courseCode": "016216",

"semester": "201901",

"Take": "1",

"FinalGrade": "79"

}

/exam: This endpoint retrieves the exam notebook for a specific student in a given course and semester. The request can be made by providing the **studentId**, **courseCode**, **semester**, and **take** as query parameters. The response will be a PDF document.

Example request:
https://api.gtiit.edu.cn/exam?studentId=999000099&courseCode=016216&semester=201901&take=1

/gradestatistics: This endpoint retrieves the statistics for the grades in a given course and semester. The request can be made by providing the **studentId**, **courseCode**, **semester**, and **Take** as query parameters. The response will include the **numberOfStudents**, **courseCode**, **semester**, **passRate**, **studentRank**, **minGrade**, **maxGrade**, and **averageGrade** for the given course.

Example request:
https://api.gtiit.edu.cn/gradestatistics?studentId=999000099&courseCode=016216&semester=201901&Take=1

Example response:

{
"numberOfStudents": "100",
"courseCode": "016216",
"semester": "201901",
"passRate": "50%",
"studentRank": "21",
"minGrade": "0",
"maxGrade": "97",
"averageGrade": "70"
}

Good luck!